

REMARKS/ARGUMENTS

Claims 20-31 are pending in the present application for the Examiner's consideration. Applicants have amended Claims 20 and 26. No new matter has been added.

In summary of the Office Action of March 5, 2003, the Examiner has:

I. Rejected Claims 20-21 and 26-27 under 35 U.S.C. §103(a) as being unpatentable over Baum et al., U.S. Patent No. 4,928,239, ("Baum") in view of DeLano et al., U.S. Patent No. 5,396,604, ("DeLano"); and

II. Rejected Claims 22-25 and 28-31 under 35 U.S.C. §103(a) as being unpatentable over Baum in view of DeLano, and further in view of Chi, U.S. Patent No. 5,784,711, ("Chi").

Applicants respectfully traverse the Examiner's rejections.

I. Summary of Interview of July 31, 2003

The Applicants' attorney spoke with the Examiner via telephone on July 31, 2003 with regard to the outstanding rejections of Claims 20-31. Although no definitive agreement was reached as to the allowability of the claims, the Applicants would like to thank the Examiner for taking the time to clarify his reasons for these rejections.

To summarize the contents of the interview, the Examiner believes that the "hint field" of the claim language is not necessarily read exclusively on the cache control specifier of Baum. Instead, the Examiner believes that any part of the memory address used by Baum to access data can be considered the "hint field" recited by the claims.

II. Rejection of Claims 20-21 and 26-27 under 35 U.S.C. §103(a)

The Examiner rejected claims 20-21 and 26-27 as unpatentable under *Baum* in view of *DeLano*. The Applicants respectfully submit that Claims 20-21 and 26-27 are patentable over *Baum* in view of *DeLano* because the references fail to disclose or suggest all of the elements of the pending claims. For example, Claim 20 recites, in part:

prefetching said data, when unavailable in said cache, in accordance with hint information contained in said hint field, wherein said hint information indicating an expected use of said data specifies a destination for said data, and said hint information is independent of said address. (Emphasis added).

Claim 26 recites a similar limitation.

Both of these claims call for prefetching data specified by an address contained in the instruction. The instruction further contains hint information. The hint information is independent of the address and specifies the destination for the data based upon the data's expected usage. It is respectfully submitted that none of the cited references disclose or suggest using hint information that is independent of the memory address to specify a destination based on the expected usage of the data.

Baum discloses a system having a multiple-set cache memory structure. In Baum, data is stored in a cache based upon its memory address. In contrast, claims 20 and 26 both call for using hint information that "specifies a destination for said data, and said hint information is independent of said address."

Additionally, Baum discloses that each "instruction executed by processor 19 . . . includes a number of bits which comprise a cache control specifier." (Baum, Col. 5, lines 23-26). The cache control specifier "specifies the method to be used in swapping data from the cache." (Baum, Col. 5, lines 34-35).

As discussed in the Applicants previous response, the "cache control specifier" of Baum does not specify a destination for data. Instead, the "cache control specifier" indicates when data referenced by an instruction and in the cache should be replaced. Since the data referenced by the instruction is already in the cache (otherwise it could not be marked for replacement), these cache control specifiers do not indicate a destination for the data referenced by the instruction.

Similarly, DeLano does not disclose or suggest the cited elements of Claims 20 and 26. DeLano discloses a computer system having a data cache memory that "decodes an instruction

requiring the CPU to load a value into a read only general purpose memory register, the instruction thereby indicating to the CPU to perform a prefetch operation.” (DeLano, Abstract). DeLano does not disclose or suggest the use of a hint field in an instruction, let alone "prefetching said data . . . in accordance with hint information contained in said hint field” as required by Claims 20 and 26.

Since neither Baum nor DeLano disclose or suggest that "hint information indicating an expected use of said data specifies a destination for said data, and said hint information is independent of said address," as required by Claims 20 and 26, it is respectfully submitted that Claim 20 and 26 are patentable over Baum in view of DeLano. Furthermore, Claims 21 and 27 are patentable by virtue of their dependence on patentable independent claims.

III. Rejection of Claims 22-25 and 28-31 under 35 U.S.C. §103(a)

The Examiner rejected claims 22-25 and 28-31 as unpatentable under Baum in view of DeLano, and further in view of Chi. The Applicants respectfully submit that Claims 22-21 and 26-27 are patentable over the cited references due to their dependence on patentable independent claims.

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Examining Group

PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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